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November 22, 2013

Via Email
Original via Mail

British Columbia Public Interest Advocacy Centre
Suite 209 – 1090 West Pender Street
Vancouver, B.C.
V6E 2N7

Attention: Ms. Tannis Braithwaite, Acting Executive Director

Dear Ms. Braithwaite:

Re: FortisBC Energy Inc. (FEI)

**Application for Approval of a Multi-Year Performance Based Ratemaking Plan
for 2014 through 2018 (the Application)**

**Response to the British Columbia Public Interest Advocacy Centre on behalf of
the British Columbia Pensioners' and Seniors' Organization *et al* (BCPSO)
Information Request (IR) No. 2**

On June 10, 2013, FEI filed the Application as referenced above. In accordance with Commission Order G-164-13 setting out the Amended Regulatory Timetable for the review of the Application, FEI respectfully submits the attached response to BCPSO IR No. 2.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC ENERGY INC.

Original signed:

Diane Roy

Attachment

cc: Commission Secretary
Registered Parties (e-mail only)



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1 **1.0 Reference: Exhibit B-6, BCPSO 1.30.1**

2 1.1 Please provide an analysis of costs that FEI has incurred and claimed related to
3 each of the framework set out in *Canderel Ltd. v. Canada*, 1998 CarswellNat 81
4 (Supreme Court of Canada) and the *Rainbow Pipe Line Co. v. R.*, 2002
5 CarswellNat 1378 (Federal Court of Appeal) decisions for 2008, 2009, 2010,
6 2011, and 2012 actual results. In the response, please include a cross reference
7 to where the costs are included in actual costs in this Application.

8
9 **Response:**

10 FEI does not track its costs incurred and claimed as deductions in computing its income for tax
11 purposes with specific reference to the framework set out in *Canderel Ltd. v. Canada*, 1998
12 *CarswellNat 81 (Supreme Court of Canada)* (“Canderel”) and *Rainbow Pipe Line Co. v. R.*,
13 2002 *CarswellNat 1378 (Federal Court of Appeal)* (“Rainbow”).

14 The starting point in computing FEI’s taxable income is its net income for book purposes. FEI
15 then makes those adjustments necessary and appropriate to adjust its book income to arrive at
16 its income for tax purposes. For the vast majority of transactions and expenditures, the
17 categorization of expenditures for book purposes aligns with the treatment for income tax
18 purposes as set out in *Canderel* and *Rainbow* and no adjustment to book income is necessary
19 to determine income for tax purposes. Where adjustments to book income are necessary to
20 compute income for tax purposes, FEI has made these adjustments in computing the tax
21 expense used for rate setting purposes.

22
23

24
25 1.2 Please provide the forecast costs and deductions related to each of *Canderel*
26 *Ltd. v. Canada*, 1998 CarswellNat 81 (Supreme Court of Canada) and the
27 *Rainbow Pipe Line Co. v. R.*, 2002 CarswellNat 1378 (Federal Court of Appeal)
28 decisions forecast for 2013, 2014, 2015, 2016, 2017, and 2018. In the response,
29 please include a cross reference to where the costs are included in actual costs
30 in this Application.

31
32 **Response:**

33 Please refer to the response to BCPSO IR 2.1.1.

34 For the years 2013 through 2018, FEI’s forecast calculation of taxable income is shown in its
35 Evidentiary Update from September 6, 2013 as indicated below:



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Year	Document Reference
2013	Section E – Schedule 23 & 25
2014	Section E - Schedule 24 & 26
2015	Appendix G-1 – Schedule 4
2016	Appendix G-1 – Schedule 9
2017	Appendix G-1 – Schedule 14
2018	Appendix G-1 – Schedule 19

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2



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1 **2.0 Reference: Exhibit B-6, BCPSO 1.34.2**

2 2.1 In BCPSO 1.90.1, FEI states “Starting in 2014 the Executive cross charges to
3 and from FortisBC Inc. (FBC) are expected to use the Massachusetts Formula
4 during the term of the PBR, instead of management estimates of time allocations
5 as used in the recent past.” Please provide an analysis that quantifies the
6 allocations of Executive cross charges under the historic method and under the
7 Massachusetts method for 2008, 2009, 2010, 2011, and 2012 actual results.
8

9 **Response:**

10 Please refer to the response to BCUC IR 2.329.7.

11
12

13
14 2.2 Please provide the forecast allocated costs for Executive cross charges for 2014,
15 2015, 2016, 2017, and 2018. In the response, please fully explain how the
16 change to the Massachusetts formula has been incorporated into the forecasts.
17

18 **Response:**

19 Please refer to the response to BCUC IR 2.329.5.

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21



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1 **3.0 Reference: Exhibit B-6, BCPSO 1.34.5.2**

2 3.1 In the response to BCPSO 1.34.5.2, FEI discusses why the Massachusetts
3 formula for the allocation of Fortis Inc. Costs. Please provide FBC's
4 understanding of other allocation formulae that may exclude the cost of energy
5 from the allocation formula, such as the Distrigas formula.
6

7 **Response:**

8 FBC and FEI are aware of other allocator models such as Kansas, ATCO and similar types of
9 allocators, however they are less relevant for allocating Fortis Inc. costs. The Commission has
10 previously approved revenue requirement applications which included the allocation of Fortis
11 Inc. costs to its subsidiaries based on the Asset Allocation methodology. The appropriateness
12 of applying the Asset Allocation methodology to allocate Fortis Inc. costs over the other
13 alternatives was further supported through external reviews in 2009 and 2013 by third party
14 consultant KMPG.

15 The response to BCPSO IR 1.34.5.2 discussed why the Fortis Inc. costs should not be allocated
16 using the Massachusetts formula due to the lack of relationship with revenue and payroll, as
17 well as the merits around the use of the Asset allocation method which has been approved by
18 the BCUC for allocating Fortis Inc. costs. That response included the price of energy in the
19 revenue calculation, however FEI is of the view that it is appropriate to use operating margin
20 which excludes the cost of energy, rather than gross revenues when applying the formula.
21 When FHI, FEI and FBC refer to the historically approved and proposed allocation of costs
22 within the FortisBC Utilities using the Massachusetts Formula, it excludes the price of energy
23 from revenue.

24 Even when considering the Massachusetts Formula excluding the cost of energy (as shown in
25 the response to BCPSO IR 2.4.1), it is still not appropriate to use in allocating Fortis Inc. costs
26 as the nature of one of the three main factors, payroll, is not considered as a reasonable driver
27 of the relationship.

28
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31 3.2 Please fully explain why the cost of energy should be included in the allocation of
32 Fortis Inc. Costs.
33
34



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1 **Response:**

2 As outlined in the response to BCPSO 1.34.5.2, the Fortis Inc. costs are allocated using the
3 Asset allocation method rather than the Massachusetts formula. The costs which are allocated
4 from Fortis Inc. are then added together with the services from FHI and are allocated to the FEU
5 via the Massachusetts formula. The net margin (revenue less cost of energy) is used as an
6 input into the Massachusetts formula, meaning that the cost of energy is **excluded** from the
7 allocation of these costs.

8

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1 **4.0 Reference: Exhibit B-6, BCPSO 1.34.5.3**

2 4.1 In the response to BCPSO 1.34.5.3, FEI provides an analysis that compares the
 3 Massachusetts formula to the current asset allocation model. In the request, the
 4 BCPSO requested that the price of energy (natural gas or electricity) be removed
 5 from the revenue used in the formula. Please confirm that the tables provided in
 6 response to BCPSO 1.34.5.3 have removed the impact of the price of energy
 7 (natural gas or electricity) be removed from the revenue used in the formula. If
 8 not confirmed, please provide a revised response that eliminates the price of
 9 energy from the revenue used in the Massachusetts formula.

10
 11 **Response:**

12 As described in the response to BCPSO IR 2.3.1, the table provided in the response to BCPSO
 13 1.34.5.3 was based on a scenario that included the price of energy in the revenue calculation.
 14 Therefore, as requested, the following table is based on the response to BCPSO 1.35.4.3 and
 15 has been revised to eliminate the price of energy from revenue for applying the Massachusetts
 16 formula.

<u>Massachusetts Formula Model revised (using operating margin) for BCPSO IR2.4.1</u>				
	Actual			<i>Estimate</i>
	2010	2011	2012	2013
	(000s)			
Net operating costs recoverable	\$ 10,015	\$ 12,239	\$ 12,953	\$ 12,575
FHI rate using Massachusetts Formula	42.08%	41.14%	41.65%	41.51%
Net operating costs allocated to FHI (excluding cost of energy)	\$ 4,214	\$ 5,035	\$ 5,395	\$ 5,220
Net operating costs allocated to FHI using Massachusetts Formula (including cost of energy) per BCPSO 1.34.5.3	\$ 4,437	\$ 5,296	\$ 5,510	\$ 5,312
Decrease in costs to FHI excluding cost of energy	(223)	(261)	(115)	(92)

17
 18
 19 While this question contemplates applying the Massachusetts formula to allocate the Fortis Inc.
 20 costs (Corporate Service fee), as described in Section D3.6.6 on page 282 of the Application,
 21 the Fortis Inc. Corporate Service fees are allocated to FHI as follows: “the allocation percentage
 22 represents the total assets of FHI as a percentage of the total assets of Fortis Inc. Fortis Inc.
 23 has consistently allocated costs across its regulated holdings by using the percentage of assets
 24 as its allocation factor”. On page 281 of the Application further elaboration is provided: “the



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- 1 services to be performed by Fortis Inc. are consistent with the services provided by Fortis Inc. to
- 2 FHI since 2009, which were approved by the Commission for recovery in respect to both the
- 3 2010-2011 RRA and 2012-2013 RRA.”
- 4



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1 **5.0 Reference: Exhibit B-6, BCPSO 1.36.1**

2 5.1 Please fully explain why a take or pay provision for corporate services is
3 required. In the response, please discuss when take or pay provisions are
4 typically included in contracts.

5
6 **Response:**

7 Take or pay provisions are typically included in contracts to ensure that the provider of the
8 service is kept whole whether or not the service contracted for is used. The receiver benefits as
9 it has access to the service, whether it uses it or not. A take or pay provision is similar to a
10 standby charge where the capacity/service has been made available. The service has a fixed
11 recovery whether or not the service is used.

12 In the case of the FHI corporate services, staffing levels and resources have been made
13 available with the understanding that FEI will utilize the services contracted. The inclusion of
14 the take or pay provision ensures the FHI is kept whole. FEI benefits as it has certainty that the
15 services contracted for will be available as and when required.

16



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1 **6.0 Reference: Exhibit B-6, BCPSO 1.42.1, 1.42.4, 1.42.5, and 1.45.1**

2 6.1 Please confirm that in performing the regression to identify a trend in UPC for
3 each rate class, FEI used only one independent variable, "time." If unable to so
4 confirm, please identify any other regressors employed.

5
6 **Response:**

7 Confirmed.

8 "Time" is the only independent variable used, consistent with the methodology employed for the
9 last decade and encapsulated in the FIS forecast model.

10 FEI notes that variances in UPC for residential and commercial customers are captured in the
11 RSAM for future return to or recovery from customers.

12
13

14
15 6.2 Please indicate the number of data points used in the regressions for each rate
16 class to determine whether there was a statistically significant trend.

17
18 **Response:**

19 The trending used by FEI incorporates 36 data points for the regressions completed for each
20 rate class to determine whether there was a significant trend. This is consistent with the Central
21 Limit Theorem which states that a sample size greater than 30 will result in a normal distribution
22 to a first approximation.

23 Please refer to the response to BCPSO IR 1.45.1.

24
25

26
27 6.3 Please provide the data points for each rate class that were subjected to the
28 linear regression "screen."

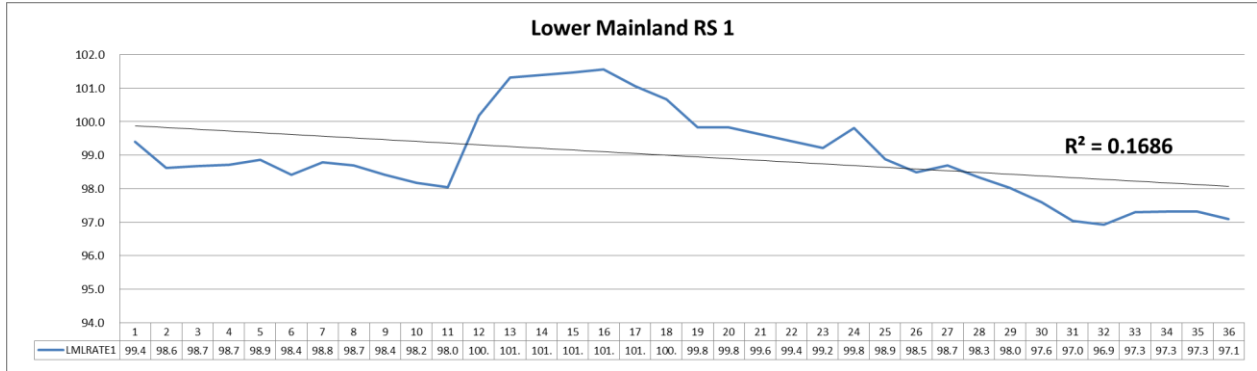
29
30 **Response:**

31 Data points are provided by region and rate class below. In addition, FEI has provided below an
32 example of a data set where trending was not used (Lower Mainland Rate Schedule 1 data)

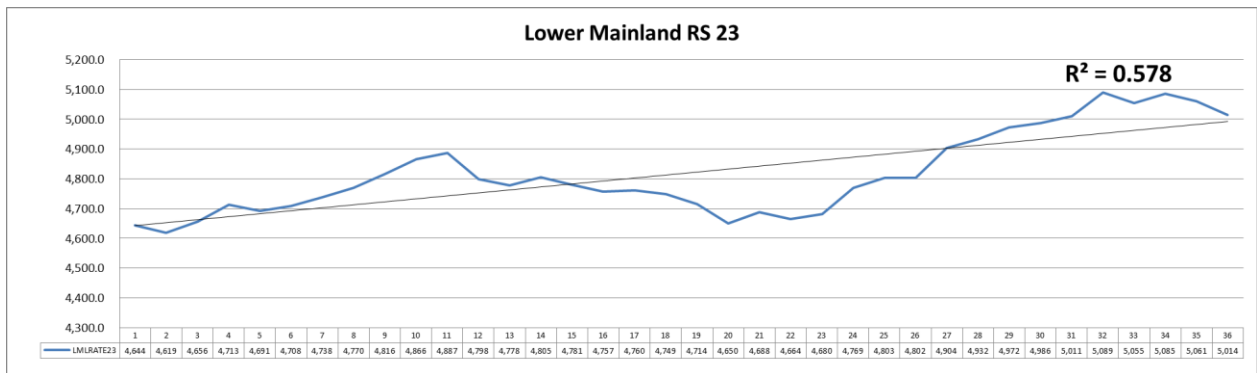
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- 1 along with an example of a data set where trending was used (Lower Mainland Rate Schedule
- 2 23 data) to demonstrate the screening process.

3



4





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Index	Columbia RS 1	Columbia RS 2	Columbia RS 23	Columbia RS 3
1	83.4	334.4	4,514.5	3,949.8
2	83.1	332.8	4,461.2	3,920.5
3	82.7	327.4	4,459.5	3,866.2
4	82.6	326.9	4,466.4	3,833.3
5	82.7	324.0	4,454.6	3,805.1
6	82.2	320.6	4,405.9	3,695.9
7	82.2	319.2	4,427.9	3,678.2
8	81.9	317.8	4,459.9	3,685.2
9	81.8	318.0	4,524.4	3,680.8
10	81.6	318.1	4,553.0	3,666.0
11	82.0	322.1	4,643.2	3,665.3
12	83.5	321.3	4,469.1	3,691.7
13	83.1	324.4	4,505.9	3,712.5
14	83.1	321.8	4,519.8	3,573.1
15	83.7	323.8	4,551.5	3,556.0
16	83.7	323.9	4,566.2	3,529.2
17	83.5	322.9	4,563.8	3,518.9
18	83.4	321.4	4,653.7	3,556.5
19	83.4	321.8	4,660.7	3,612.4
20	83.4	321.2	4,639.3	3,594.2
21	83.1	319.8	4,683.1	3,455.4
22	83.1	319.4	4,769.8	3,617.6
23	82.6	316.7	4,760.7	3,613.1
24	81.9	316.6	4,875.3	3,571.6
25	81.6	315.1	4,936.0	3,572.4
26	81.1	313.9	4,931.2	3,634.9
27	81.0	316.2	4,985.7	3,700.7
28	80.7	319.7	5,076.9	3,723.8
29	80.4	321.1	5,109.5	3,746.3
30	80.3	318.3	5,103.0	3,695.1
31	79.9	317.2	5,135.6	3,625.0
32	79.9	317.5	5,216.4	3,625.1
33	80.0	318.4	5,231.1	3,754.9
34	80.0	317.9	5,203.2	3,561.6
35	80.1	319.2	5,225.0	3,587.1
36	80.1	318.3	5,304.0	3,601.6



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1	76.4	275.2	5,097.9	3,550.0
2	76.2	274.6	5,069.6	3,586.7
3	75.9	271.6	5,090.0	3,508.5
4	75.8	271.9	5,094.0	3,468.8
5	76.2	272.9	5,121.6	3,408.4
6	76.0	271.8	5,122.6	3,420.3
7	76.0	272.8	5,132.6	3,409.9
8	76.0	274.1	5,139.3	3,401.6
9	75.9	273.7	5,204.2	3,401.4
10	75.7	274.2	5,210.0	3,389.1
11	75.5	274.2	5,252.5	3,405.2
12	76.9	281.5	5,350.3	3,423.7
13	76.2	286.0	5,214.8	3,422.2
14	76.3	283.5	5,192.9	3,444.0
15	77.0	283.6	5,192.4	3,428.1
16	77.2	283.0	5,178.8	3,471.0
17	76.6	280.2	5,123.9	3,462.9
18	76.2	279.0	5,113.6	3,495.0
19	76.2	277.8	5,095.0	3,493.3
20	76.1	276.6	5,081.6	3,488.5
21	75.9	275.3	5,064.6	3,449.0
22	75.8	274.9	5,054.8	3,452.4
23	75.7	273.6	5,198.3	3,369.1
24	75.7	275.8	5,254.5	3,494.9
25	75.4	274.7	5,382.1	3,430.2
26	74.9	274.4	5,526.8	3,494.1
27	74.5	278.3	5,601.6	3,444.8
28	74.4	276.5	5,650.1	3,477.4
29	74.7	276.0	5,716.6	3,503.0
30	75.0	274.4	5,722.0	3,438.2
31	74.8	272.7	5,723.0	3,388.4
32	74.8	272.5	5,762.7	3,400.1
33	74.9	273.5	5,790.1	3,448.6
34	75.1	273.5	5,821.4	3,466.4
35	74.7	273.8	5,788.7	3,551.8
36	74.7	273.1	5,749.7	3,441.0

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1	99.4	331.2	4,644.3	3,516.8
2	98.6	328.2	4,619.6	3,529.5
3	98.7	325.3	4,656.0	3,391.9
4	98.7	326.4	4,713.9	3,370.7
5	98.9	325.2	4,691.3	3,333.2
6	98.4	324.8	4,708.1	3,282.4
7	98.8	326.0	4,738.1	3,316.5
8	98.7	325.4	4,770.1	3,309.4
9	98.4	322.7	4,816.4	3,281.3
10	98.2	325.5	4,866.8	3,272.3
11	98.0	325.4	4,887.0	3,273.2
12	100.2	335.6	4,798.1	3,352.9
13	101.3	336.6	4,778.4	3,357.2
14	101.4	331.5	4,805.4	3,351.1
15	101.5	331.6	4,781.0	3,365.2
16	101.6	329.8	4,757.6	3,367.4
17	101.1	327.8	4,760.5	3,362.1
18	100.7	325.9	4,749.0	3,371.5
19	99.8	322.9	4,714.4	3,333.8
20	99.8	323.2	4,650.2	3,342.5
21	99.6	325.1	4,688.6	3,336.3
22	99.4	322.0	4,664.9	3,330.5
23	99.2	321.4	4,680.5	3,347.0
24	99.8	324.7	4,769.0	3,338.3
25	98.9	326.0	4,803.2	3,356.9
26	98.5	327.9	4,802.3	3,396.7
27	98.7	331.4	4,904.5	3,418.1
28	98.3	330.4	4,932.2	3,465.1
29	98.0	329.9	4,972.1	3,488.7
30	97.6	330.5	4,986.7	3,473.4
31	97.0	329.7	5,011.4	3,463.8
32	96.9	329.3	5,089.7	3,469.1
33	97.3	330.1	5,055.4	3,494.8
34	97.3	330.0	5,085.4	3,488.8
35	97.3	330.9	5,061.1	3,481.8
36	97.1	329.3	5,014.7	3,484.6



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Index	Revelstoke RS 1	Revelstoke RS 2	Revelstoke RS 3
1	51.0	301.4	4,335.8
2	52.5	299.7	4,398.3
3	54.5	302.8	4,485.0
4	56.7	306.9	4,574.5
5	59.3	310.5	4,648.5
6	60.0	312.5	4,680.4
7	55.1	305.5	4,352.8
8	55.5	306.3	4,378.8
9	55.5	305.8	4,385.7
10	54.9	303.1	4,325.3
11	55.4	305.2	4,294.1
12	55.9	309.8	4,267.6
13	56.8	316.2	4,250.4
14	57.8	322.4	4,260.1
15	58.9	325.1	4,238.0
16	57.5	322.1	4,202.9
17	55.4	312.7	4,118.9
18	54.7	310.1	4,098.6
19	59.4	311.6	4,437.3
20	58.5	307.8	4,388.9
21	58.4	308.5	4,381.7
22	57.7	306.1	4,353.5
23	53.8	306.2	4,696.6
24	51.6	309.0	4,892.9
25	50.5	305.4	4,940.9
26	49.7	302.8	4,987.9
27	47.6	298.8	5,066.9
28	47.5	297.3	5,136.6
29	47.8	300.5	5,241.8
30	47.7	299.9	5,366.0
31	47.9	300.7	5,358.8
32	48.2	302.0	5,378.2
33	47.7	299.6	5,374.5
34	48.0	301.8	5,412.2
35	51.5	302.6	5,062.6
36	54.2	308.4	5,023.6

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1
2 6.4 Are summary statistics, including the F-statistic, t-statistic, R2 statistic, etc.,
3 available for each regression performed? If so, please provide the summary
4 output of the regression run for each rate class.

5
6 **Response:**

7 Summary statistics are provided below along with an indicator as to whether the output from the
8 regression was used. At this time, FEI considers only R² as a proxy for the goodness of fit of the
9 overall model performance. Given only one variable as a predictor of the model (“time”), the
10 ANOVA (Analysis of Variance) F-statistic or t-statistic are not used.

Region/Rate Schedule	R ²	Method
Columbia RS 1	0.498	3 Yr. Avg
Columbia RS 2	0.438	3 Yr. Avg
Columbia RS 23	0.893	Trend
Columbia RS 3	0.255	3 Yr. Avg
Inland RS 1	0.490	3 Yr. Avg
Inland RS 2	0.004	3 Yr. Avg
Inland RS 23	0.685	Trend
Inland RS 3	0.001	3 Yr. Avg
Lower Mainland RS 1	0.169	3 Yr. Avg
Lower Mainland RS 2	0.041	3 Yr. Avg
Lower Mainland RS 23	0.578	Trend
Lower Mainland RS 3	0.230	3 Yr. Avg
Revelstoke RS 1	0.370	3 Yr. Avg
Revelstoke RS 2	0.086	3 Yr. Avg
Revelstoke RS 3	0.566	Trend

11
12
13
14
15 6.5 Is there a minimum value for R2 that FEI uses to determine whether “the fit is
16 good”? If so, please provide this value and explain how it was determined.

17
18 **Response:**

19 The R2 statistic indicates how well the model fits the data. At this time, FEI considers an R2
20 value greater than 50 percent to be acceptable.



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1 FEI is unaware of any industry standard regarding an acceptable R2 value as R2 value can vary
2 significantly across different methodologies depending on whether original data are used and
3 types of data transformations are performed prior to model fitting. FEI believes R2 values
4 greater than 50 percent are adequate given the time series nature of the data being used in this
5 trending.

6 The regression analysis at this time indicates that a statistically significant trend exists for the
7 following regions and rate classes:

- 8 • Columbia RS 23
- 9 • Inland RS 23
- 10 • Lower Mainland RS 23
- 11 • Revelstoke RS 3

12

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1 **7.0 Reference: Exhibit B-6, BCPSO 1.43.3**

2 **Preamble:** The figure provided in response to the referenced IR shows that for each
3 year, 2004-2008 inclusive, residential net additions forecasted exceeded
4 actual residential net additions; then, for each year, 2009-2012 inclusive,
5 residential net additions forecasted were less than actual residential net
6 additions. This pattern is consistent with forecasting errors not being
7 random and independent from year to year.

8 7.1 Did FEI conduct any non-parametric test (e.g., a “Runs Test”) to determine
9 whether the forecasting errors were random and independent? If so, please
10 provide the results of any such tests.

11
12 **Response:**

13 The residential net additions forecast method is based on the housing starts forecast prepared
14 by the Conference Board of Canada (CBOC). FEI’s analysis indicates that the forecasting errors
15 appear to be random.

16 A “Runs Test” can be used to determine if a data set is from a random process. A Small Sample
17 Runs Test was performed to detect randomness in the residential net additions forecasting
18 variance. The analysis looked to see whether over or under forecasting residential net additions
19 in a given year is random (50/50 chance) without one outcome being more likely than the other.

20 The value of the test statistic from the Small Sample Runs Test conducted on residential net
21 additions from 2004-2012 was 2. The lower and upper limits of the critical values are 2 and 9
22 respectively based on the confidence level of 95 percent. The Critical values table is provided
23 below for reference. “m” represents the number of observations of the first type (“over forecast”)
24 and is 5. “n” represents the number of observations of the second type (“under forecast”) and is
25 4.

26 The test statistic is within the range of the lower and upper limits so we are unable to confirm
27 that the forecasting errors are not random.

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TABLE G
Critical values of r in the runs test*

Given in the tables are various critical values of r for values of m and n less than or equal to 20. For the one-sample runs test, any observed value of r which is less than or equal to the smaller value, or is greater than or equal to the larger value in a pair is significant at the $\alpha = .05$ level.

$m \backslash n$	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2	2
3	-	-	-	-	-	2	2	2	2	2	2	2	2	3	3	3	3	3	3
4	-	-	-	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4
5	-	-	2	2	3	3	3	3	3	4	4	4	4	4	4	4	5	5	5
6	-	2	2	3	3	3	3	4	4	4	4	5	5	5	5	5	5	6	6
7	-	2	2	3	3	3	4	4	5	5	5	5	5	6	6	6	6	6	6
8	-	2	3	3	3	4	4	5	5	5	6	6	6	6	6	7	7	7	7
9	-	2	3	3	4	4	5	5	5	6	6	6	7	7	7	7	8	8	8
10	-	2	3	3	4	5	5	5	6	6	7	7	7	7	8	8	8	8	9
11	-	2	3	4	4	5	5	6	6	7	7	7	8	8	8	9	9	9	9
12	-	2	3	4	4	5	6	6	7	7	7	8	8	8	9	9	9	10	10
13	-	2	3	4	5	5	6	6	7	7	8	8	9	9	9	10	10	10	10
14	-	2	3	4	5	5	6	7	7	8	8	9	9	9	10	10	10	11	11
15	-	2	3	4	5	6	6	7	7	8	8	9	9	10	10	11	11	11	12
16	-	2	3	4	4	5	6	6	7	8	8	9	9	10	10	11	11	12	12
17	-	2	3	4	4	5	6	7	7	8	9	9	10	10	11	11	12	12	13
18	-	2	3	4	5	5	6	7	8	8	9	9	10	10	11	11	12	13	13
19	-	2	3	4	5	6	6	7	8	8	9	10	10	11	11	12	13	13	13
20	-	2	3	4	5	6	6	7	8	9	9	10	10	11	12	12	13	13	14

* Adapted from Swed, and Eisenhart, C. (1943). Tables for testing randomness of grouping in a sequence of alternatives. *Annals of Mathematical Statistics*, 14, 83-86, with the kind permission of the authors and publisher.



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1 **8.0 Reference: Exhibit B-6, BCPSO 1.47.1**

2 8.1 Does FEI agree that the most significant factor affecting residential use of natural
3 gas is the weather, as measured by Heating Degree Days?

4
5 **Response:**

6 FEI agrees that the most significant factor affecting residential use of natural gas is the weather.

7 Weather itself is not a direct input into the forecast. There are no reliable forecasts of weather
8 that could be used to improve the forecast accuracy. Rather, historical weather data is used to
9 normalize historical use rates. FEI can then use the normalized historical use rates (which have
10 removed the impact of weather) to forecast future use rates.

11 Please refer to Section C.1.3.2 of the Application for more information.

12
13

14

15 8.2 Does FEI agree that the point of normalizing residential demand is to remove the
16 effect of the weather in each year?

17

18 **Response:**

19 As discussed in Section C1.3.2 of the Application, FEI agrees that the point of normalizing
20 residential demand is to remove the effect of the weather in each year. Please refer to the
21 response to BCPSO IR 2.8.1.

22



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1 **9.0 Reference: Exhibit B-6, BCPSO 1.50.2**

2 9.1 Is FEI able to provide details of the most recent instances of it determining that
3 base salary and/or incentive target was above 110% of market median and then
4 correcting the situation so that, in the future, the targeted compensation was
5 returned to the 80%-110% band?
6

7 **Response:**

8 In order to maintain base salaries below 110 percent of the market median, each year FEI's
9 compensation team reviews all M&E employee compa ratios (the percentage of the actual
10 salary relative to the market median or 100 percent of the range). Those individuals whose
11 actual salary exceeds 110 percent of the market median do not generally receive base pay
12 adjustments (a lump sum payment may be given, where appropriate, but not added to base)
13 until such time as the actual salary is within 110 percent of the market median. In this way, the
14 integrity of individual salary placements relative to the salary band is managed over time. Of the
15 FEI M&E employees at year-end 2012, 50 were above 110 percent. A new integrated salary
16 banding system was introduced in 2011 which resulted in some positions being above 110
17 percent; as described above, this will reduce over time.

18 As indicated in the response to BCUC IR 1.79.2.3, average actual compensation for FEI M&E
19 employees for 2013 is at 93 percent of the market median for the various ranges.

20

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1 **10 Reference: Exhibit B-6, BCPSO 1.54.1**

2 10.1 The response appears to indicate that since 2011, 87 vehicles have been
 3 purchased. Please provide the number of vehicles retired, by type, since 2011.

4
 5 **Response:**

6 The table from BCPSO 1.54.1 uses data from the mid-year point in 2012 and the vehicle model
 7 year may not correspond to the calendar year of the vehicle purchase. For example, 2011
 8 model year vehicles can be acquired as early as 2010, and some could also be acquired in
 9 2012.

10 Matching up the acquired and retired timelines, FEI acquired 99 vehicles and retired 89 vehicles
 11 from 2011 to first half 2012. Then, FEI acquired 74 vehicles and retired 66 vehicles from the
 12 second half of 2012 to YTD. As such, the total vehicles retired, by type, since 2011 is 155 as
 13 shown in the tables below.

Vehicle Type	Acquired calendar year 2011 to first half 2012	Retired calendar year 2011 to first half 2012	Net
CARS	0	0	0
LIGHT TRUCKS & VANS	94	80	14
MEDIUM TRUCKS	3	7	-4
HEAVY TRUCKS	2	2	0
Sub Total (a)	99	89	10

Vehicle Type	Purchased Second half calendar year 2012 to YTD	Retired Second half calendar year 2012 to YTD	Net
CARS	2	0	2
LIGHT TRUCKS & VANS	65	56	9
MEDIUM TRUCKS	6	9	-3
HEAVY TRUCKS	1	1	0
Sub Total (b)	74	66	8
Grand Total (a+b)	173	155	18

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10.2 Please provide the number of vehicles by type in FEI's fleet for each year, 2006-2013 inclusive.



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1 **Response:**

Vehicle Type	2006	2007	2008	2009	2010	2011	2012	2013
CAR	14	13	13	14	12	12	12	13
LIGHT TRUCKS & VANS	341	350	349	353	362	365	388	387
MEDIUM TRUCKS	53	54	55	61	56	61	57	56
HEAVY TRUCKS	8	10	10	9	8	7	7	7
Total	416	427	427	437	438	445	464	463

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1 **11 Reference: Exhibit B-6, BCPSO 1.56.2**

2 11.1 Please provide a copy of the CGA's "Guiding Document on Asset Management."

3

4 **Response:**

5 Please refer to the response to BCUC IR 2.304.1.

6